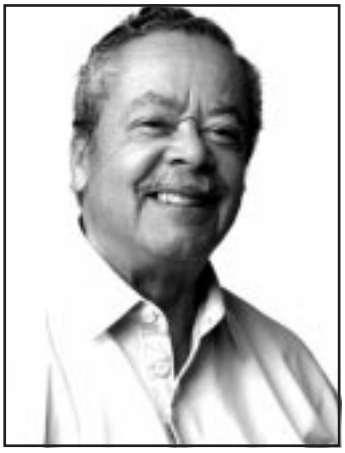
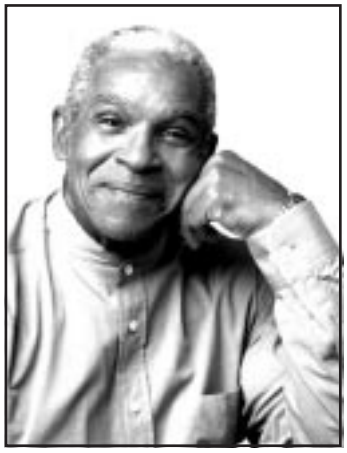
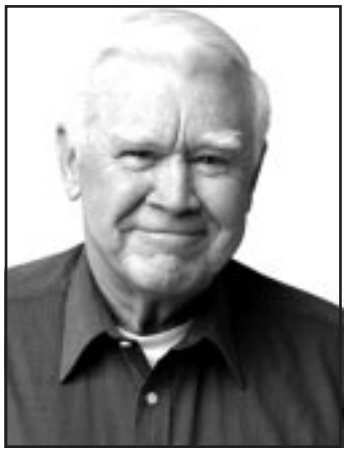
Prostate Cancer:
Can We Reduce Deaths and Preserve Quality of Life?

AT-A-GLANCE
1999

"We must move toward the development of health messages that reflect the best medical knowledge available to date on prostate cancer to meet the information needs of primary care clinicians and of the public."

David Satcher, MD, PhD
Director, Centers for Disease Control and Prevention, 1993–1998

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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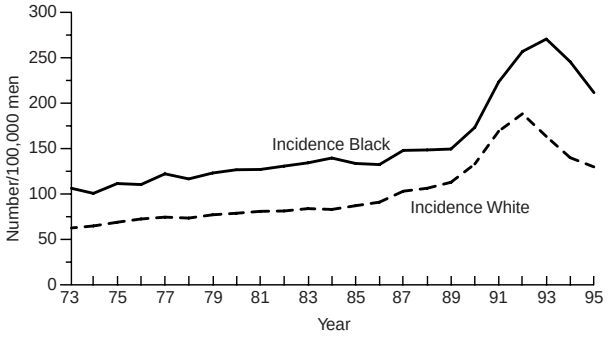
The Burden of Prostate Cancer

Prostate cancer is the most commonly diagnosed form of cancer, other than skin cancer, among men in the United States and is second only to lung cancer as a cause of cancer-related death. The American Cancer Society (ACS) estimates that 179,300 new cases of prostate cancer will be diagnosed and that approximately 37,000 men will die of the disease in 1999.

At all ages, African American men are diagnosed with the disease at later stages and die of prostate cancer at higher rates than white men. The incidence of this disease among African American men is the highest in the world.

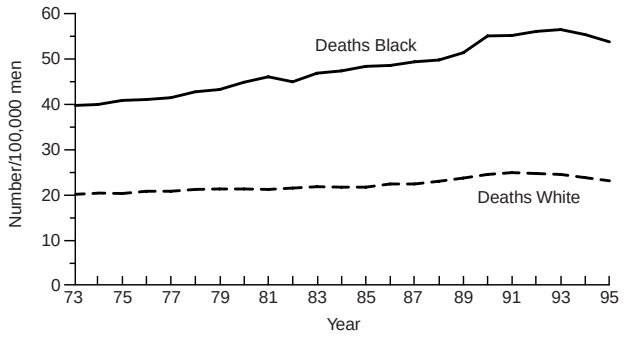
This cancer is most common among men aged 65 years and older. About 80% of all men with clinically diagnosed cases of prostate cancer are in this age group. Because prostate cancer usually occurs at an age when other medical conditions, such as heart disease and stroke, may contribute significantly to the cause of death, the actual number of men who die *with* prostate cancer rather than *of* it is unknown.

Prostate Cancer (Invasive): U.S. Incidence, by Race, 1973–1995



Source: National Cancer Institute, *SEER Cancer Statistics Review*, 1973–1995.

Prostate Cancer (Invasive): U.S. Death Rates, by Race, 1973–1995



Source: National Cancer Institute, *SEER Cancer Statistics Review*, 1973–1995.

Early Detection

Preventable risk factors for prostate cancer are unknown, and effective measures to prevent this disease have not been determined. Screening for and treating disease at an early stage have been proposed to reduce the risk of dying of prostate cancer. However, scientific evidence is insufficient to determine if screening for prostate cancer reduces deaths or if treatment of disease at an early stage is more effective than no treatment in prolonging a person's life. Currently, health practitioners cannot accurately determine which cancers will progress to become clinically significant and which will not. Thus, widespread screening and testing for early detection of prostate cancer are not scientifically justified at this time.

Professional medical organizations are divided on the issue of screening for prostate cancer. The U.S. Preventive Services Task Force (USPSTF) recommends against routine screening but stresses the need for "informed decision making," acknowledging that patients who request screening should be given objective information about early detection and the potential benefits and risks of treatment. The Centers for Disease Control and Prevention (CDC) supports the USPSTF recommendations. The ACS and the American Urological Association (AUA) recommend that men who have at least a 10-year life expectancy have a digital rectal examination and prostate-specific antigen measurement annually, beginning at age 50, and that information be provided to patients regarding both the benefits and risks of intervention. They also recommend that screening start at a younger age for men of African descent and for men with a family history of prostate cancer; the AUA suggests that these high-risk groups begin testing at age 40.

Two commonly used methods for detecting prostate cancer are currently available to clinicians:

Digital rectal examination (DRE) has been used for years as a screening test for prostate cancer. However, its ability to detect prostate cancer is limited. Small tumors often form in portions of the prostate that cannot be reached by a DRE. Clinicians may also have difficulty distinguishing between benign abnormalities and prostate cancer, and the inter-pretation and results of the examination may vary with the experience of the examiner.

The **prostate-specific antigen (PSA) measurement** is a blood test that many clinicians use, but medical consensus on its use and interpretation has not been reached. PSA is an enzyme measured in the blood that may rise naturally as men age. It also rises in the presence of prostate abnormalities. However, the PSA test cannot distinguish prostate cancer from benign growth of the prostate and other conditions of the prostate, such as prostatitis. PSA testing also fails to detect some prostate cancers—about 20% of patients with biopsy-proven prostate cancer have PSA levels within normal range.

Treatment Options

Physicians have become increasingly aware of the psychosocial aspects of prostate cancer and its treatment. Health professionals are realizing that the question is not merely how a life can be saved, but also how quality of life can be preserved. Many community education and support programs are available to help men and their families make informed decisions that will suit their needs, desires, and lifestyles.

Appropriate treatment options for men with prostate cancer are based on the stage of the cancer at the time of diagnosis. Patient outcomes and the quality of life after treatment are influenced by the patient's age, the presence of other medical conditions, and the aggressiveness of the tumor.

When Prostate Cancer Has Not Spread

Several treatment alternatives are available to patients with early stage cancer that has not spread beyond the prostate. These include the following:

Radical prostatectomy, or complete surgical removal of the prostate, is frequently used for patients younger than 70 years who are otherwise in good health. Complications of radical prostatectomy may be short- or long-term; 5%–19% of men become incontinent, and 24%–62% become sexually impotent. The risk for these complications increases with age and with the amount of damage to nerve and blood supplies during the surgical procedure. Currently, definitive evidence that this surgical procedure reduces deaths or prolongs life is not available.

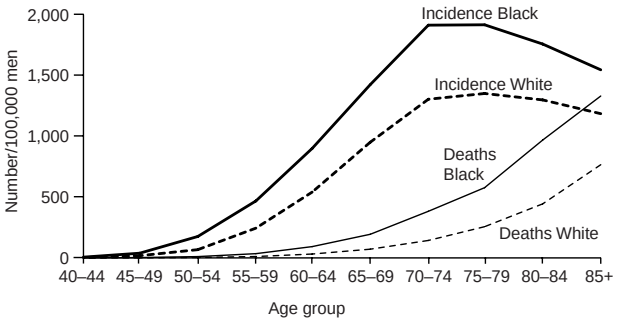
Radiation therapy, or treatment of the tumor site with low levels of radiation, is used for cancer that is confined to the prostate or surrounding tissue. Some side effects of radiation therapy, which can include acute inflammation of the bladder, rectum, and intestines, are generally reversible. Following radiation therapy, 25%–44% of men experience some degree of sexual impotence, and 0.5%–7% of men become incontinent.

Watchful waiting, or no immediate treatment, is also an option for men with prostate cancer because of the often slow progress of this disease. When this option is chosen, the tumor is evaluated periodically for changes that suggest rapid growth. Recent studies have found that watchful waiting may be an acceptable management alternative, particularly for older men with small low-grade tumors that are unlikely to spread.

When Prostate Cancer Has Spread

Patients with cancer that has spread beyond the prostate gland may receive radiation and hormonal therapies to inhibit further progression of the cancer, but most of these tumors eventually become resistant to hormonal therapy. Some patients with advanced disease may choose to participate in clinical trials of experimental therapies.

Prostate Cancer (Invasive): Average Annual U.S. Incidence and Death Rates, by Age and Race, 1991–1995



Source: National Cancer Institute, *SEER Cancer Statistics Review*, 1991–1995.

CDC's Leadership to Build the Science Base and Educate the Public

With fiscal year 1999 funding of approximately $8 million for prostate cancer activities, CDC is working to clarify issues related to early detection. In the absence of scientific consensus on the effectiveness of prostate cancer screening in reducing deaths, state public health agencies face a significant challenge in determining how best to meet the public's need for and interest in prostate cancer information. Recognizing this challenge, CDC is building the science base for prostate cancer and working with key partners to develop and deliver appropriate messages that will enable the public, physicians, and policy makers to make informed decisions regarding prostate cancer screening and follow-up.

CDC activities include

- Supporting six grantees (Colorado, Massachusetts, Michigan, North Carolina, Texas, and the Northwest Portland Indian Health Board) for comprehensive cancer control efforts that will include activities targeting prostate cancer. Funding will be used to establish broad-based coalitions, coordinate surveillance, and develop and disseminate public education programs to reduce cancer risk.
- Working with the Association of State and Territorial Health Officials to ensure that health departments provide accurate and useful information to the public about the benefits and risks associated with PSA screening tests.
- Working with research teams in Oklahoma, Texas, and the District of Columbia to develop, implement, and evaluate communications tools to help men decide whether to be screened for prostate cancer. Research teams will conduct focus groups to better understand the potential effects of psychosocial and cultural factors and knowledge of treatment risks on screening decisions.
- Analyzing mainstream print media messages to determine what prostate cancer information is currently being provided to the public in general and to the African American community in particular. Information from this analysis will be used in planning and developing messages and materials on prostate cancer.
- Working with the Henry Ford Health System, the University of Alabama, and the National Cancer Institute to increase the recruitment of African American men into the Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trials. These trials are designed to increase understanding of the greater risk for prostate cancer among African American men and answer the critical question of whether screening for prostate cancer prevents deaths.
- Working with the University of California at Berkeley through CDC's Prevention Research Centers network to examine clinical and demographic factors among African American and white men that increase their risk for prostate cancer. Findings from this research will be used to better tailor prostate cancer prevention efforts.
- Conducting a collaborative study with the Alliance of Community Health Plans to compare the medical records of patients with their own report of whether they received a PSA test. Most of the information available about the use of PSA testing is based on surveys in which patients report their own personal history of screening. Findings from this study will help to determine whether survey data on PSA testing are reliable and will also help guide interventions to ensure that patients are properly informed about the PSA testing they receive.
- Collaborating with four managed care organizations (Kaiser Northwest, Kaiser of Southern California, Kaiser of North California, and Henry Ford Health Systems) to study the effectiveness of PSA screening in preventing deaths from prostate cancer. The medical histories of men who died of prostate cancer will be compared with those of men who died of other causes to determine if the former group was less likely to have had PSA screening.

For more information or additional copies of this document, please contact the
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